

### **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

1. (currently amended) An enhanced inserted yellow fluorescence protein according to SEQ ID NO:1, wherein the amino acid sequence of YGGSGAS beginning at position 146 enhances fluorescence of the protein as compared to the enhanced inserted yellow fluorescence protein without the amino acid sequence of YGGSGAS.
2. (Withdrawn) A nucleic acid sequence encoding the enhanced inserted yellow fluorescence protein as claimed in claim 1.
3. (Withdrawn) The nucleic acid sequence as claimed in claim 2 comprising BamHI and NheI restriction enzyme recognition sites.
4. (previously presented) The enhanced inserted yellow fluorescence protein as claimed in claim 1, wherein the 199<sup>th</sup> amino acid (proline) in SEQ ID NO:1 is replaced by leucine to form a modified enhanced inserted yellow fluorescence protein having a sequence according to SEQ ID NO:2.
5. (Withdrawn) A nucleic acid sequence encoding the enhanced inserted yellow fluorescence protein as claimed in claim 4.
6. (previously presented) The enhanced inserted yellow fluorescence protein as claimed in claim 1 or claim 4 further comprising an additional peptide covalently coupled to the enhanced inserted yellow fluorescence protein.
7. (Withdrawn) A nucleic acid sequences encoding the enhanced inserted yellow fluorescence protein as claimed in claim 6.
8. (previously presented) The enhanced inserted yellow fluorescence protein as claimed in claim 6, the additional peptide comprising an NS3 protease's substrate recognition site of human Hepatitis C virus (HCV NS3).

9. (Withdrawn) A nucleic acid sequence encoding the enhanced inserted yellow fluorescence protein as claimed in claim 8.
10. (previously presented) The enhanced inserted yellow fluorescence protein as claimed in claim 6, wherein the additional peptide has a sequence that allows the additional peptide to bind calcium.
11. (Withdrawn) A nucleic acid sequence encoding the enhanced inserted yellow fluorescence protein as claimed in claim 10.
12. (previously presented) The enhanced inserted yellow fluorescence protein as claimed in claim 6, the additional peptide comprising a DEVD amino acid sequence (SEQ ID NO:17) recognizable by caspase.
13. (Withdrawn) A nucleic acid sequence encoding the enhanced inserted yellow fluorescence protein as claimed in claim 12.
14. (Original) A bioactivity assay system, for use in vivo or in vitro, comprising the enhanced inserted yellow fluorescence protein as claimed in claim 6.
15. (Original) A biosensor, for use in vivo or in vitro, comprising the enhanced inserted yellow fluorescence protein as claimed in claim 1 or claim 4.
16. (New) An enhanced inserted yellow fluorescence protein according to SEQ ID NO:1, wherein amino acid insert sequence YGGSGAS begins at position 146.